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EXAMINER

LEE, CHUN KUAN

ART UNIT

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2181

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<p align="center"><b>Office Action Summary</b></p>	Application No. 10/777,733	Applicant(s) HSIEH, HSIANG-AN	
	Examiner Chun-Kuan (Mike) Lee	Art Unit 2181	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,7,8,16,17,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,7,8,16,17,21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **RESPONSE TO ARGUMENTS**

1. Applicant's arguments with respect to claims 1, 3, 7-8, 16-17 and 21-22 have been considered but are moot in view of the new ground(s) of rejection. Rejections of claims 1, 3, 7-8, 16-17 and 21 under 35 U.S.C. § 112 1<sup>st</sup> paragraph is withdrawn. Rejections of claim 21 under 35 U.S.C. § 112 2<sup>nd</sup> paragraph is withdrawn. Currently, claims 2, 4-6, 9-15, 18-20 are canceled and claims 1, 3, 7-8, 16-17 and 21-22 are pending for examination.

### **I. INFORMATION CONCERNING OATH/DECLARATION**

#### **Oath/Declaration**

2. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

### **II. INFORMATION CONCERNING DRAWINGS**

#### **Drawings**

3. The applicant's drawings submitted are acceptable for examination purposes.

### **III. OBJECTIONS TO THE CLAIMS**

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3, 7-8, 16-17 and 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, in regards to the claimed limitation "one of different kinds of CompactFlash-format storage media," it appears unclear how the "CompactFlash-format storage media" can be of different formats, as the storage media conforms to the single CompactFlash-format. The examiner will assume the "one of different kinds of storage media" for the current examination.

Claims 3, 7-8, 16-17 and 21-22 are rejected at least due to direct dependency on the rejected independent claim 1, furthermore, each of the corresponding dependent claims, the examiner will assume the claimed limitation "storage media" in place of "CompactFlash-format storage media" for the current examination.

#### **IV. REJECTIONS BASED ON PRIOR ART**

##### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 7-8, 16-17 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mowery et al. (US Patent 6,984,152) in view of Jones et al. (US Pub

2003/0084220 A1) and "PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs".

6. As per claim 1, Mowery teaches a multiple format interface adapter for small storage media comprising:

a storage media interface (Fig. 3, ref. 310 and media card side of Fig. 16), connected one of a different kinds of storage media (Fig. 3, ref. 315) to the multiple format interface adapter (adapter 1610 of Fig. 16) (Fig. 16 and col. 5, ll. 43-46), wherein the one of the different kind of storage media includes Smart Media, SD/MMC and Memory Stick;

a system-end interface (host side of Fig 16) used to connect the multiple format interface adapter (adapter 1610 of Fig. 16);

a signal controller (e.g. translation logic) (Fig. 1, ref. 120), converting signals between the system-end interface and the storage media interface when one of the storage media inserts in the multiple format interface adapter (col. 2, ll. 13-20).

Mowery does not teach the multiple format interface adapter for small storage media comprising wherein the system-end interface have a double configuration interface, having two different system end formats, wherein the system-end formats include an universal serial bus interface and a PCI Express interface to electronically connect the multiple format interface adaptor to any one of two different kind of system ends; and signal controller converting between the double-configuration interface and the storage media interface.

Jones teaches an interface adaptor (Fig. 3B, ref. 40) card reader that connects one of a plurality of memory cards (Fig. 3B, ref. 41, 43, 45, 47) of different formats (e.g. MMC, SD, SM, MS) to a plurality of system-end interfaces (Fig. 3B, ref. 51, 53 and Fig. 4, ref. 176) (e.g. PCMCIA, IDE) (Fig. 3C; Fig. 4 and [0073]-[0074]), wherein each system end interface would comply with its own system-end format.

Mowery and Jones are analogous art because they are the field of applicant's endeavor, which is connecting a plurality of different formats of memory cards (e.g. small storage media) to the computer system.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Jones' interface adapter having the plurality of system-end interfaces into Mowery's multiple format interface adapter. The resulting combination of the references further teaches the multiple format interface adapter for small storage media comprising the PCMCIA system-end interface and the IDE system-end interface (e.g. double configuration interface) with two different system end format, electronically connecting the multiple format interface adaptor to any one of two different kind of system ends; and signal controller converting either between the PCMCIA interface or the IDE interface and the storage media interface.

The suggestion/motivation for doing so would have been for the benefit of implementing an active adapter that can be used interchangeably connecting a different memory/memories and a device (Jones, [0023]).

Therefore, it would have been obvious to combine Jones with Mowery for the benefit of implementing an active adapter that can be used interchangeably connecting

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a different memory/memories and a device to obtain the invention as specified in claim

1.

"PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs" teaches the new development of the codename NEWCARD, which supporting the USB 2.0 and PCI Express I/O technology (page1), wherein the interface of the NEWCARD, also known as Express Card, would have a double-configuration interface conforming to the USB 2.0 and PCI Express I/O technology.

"PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs" is analogous art not only because it is in the field of applicant's endeavor, which is technology associated with the PCMCIA for an interface card; it is also reasonably pertinent to the particular problem with which the applicant was concerned, which is implementing the adaptor card with both the USB interface and PCI-Express interface.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs' dual I/O interface technology into Mowery's interface adapter. The resulting combination of the references further teaches he multiple format interface adapter for small storage media comprising wherein the double configuration interface include the universal serial bus interface and the PCI Express interface

The suggestion/motivation for doing so would have been for the interface adapter to become smaller in size, to increase speed, lower costs and support two popular advance serial I/O technology (PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs, page 1).

Therefore, it would have been obvious to combine PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs with Mowery and Jones for the benefit of reducing size and cost of the adapter while increasing the data transferring speed.

7. As per claim 3, Mowery, Jones and "PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs" teach all the limitations of claim 1 as discussed above, where Jones further teaches the multiple format interface adapter for small storage comprising wherein the storage media includes a fixed small hard disk (e.g. MicroDrive) (Jones, Claim 5), wherein the MicroDrive is a fix small hard drive.

8. As per claim 7, Mowery, Jones and "PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs" teach all the limitations of claim 1 as discussed above, where Mowery further teaches the multiple format interface adapter for small storage comprising wherein the double-configuration interface includes a power terminal that transmits an operating voltage issued from the system (e.g. host) when one of the storage media inserts (Mowery, Fig. 6B; Fig. 8 and col. 5, l.



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32 to col. 6, l. 20), as the power for operation from the host will not apply if there is no storage media card inserted

9. As per claim 8, Mowery, Jones and "PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs" teach all the limitations of claim 1 as discussed above, where Jones further teaches the multiple format interface adapter for small storage comprising wherein the storage media interface further includes a plurality of address terminals, data transmission terminals and control terminals (Jones, [0082]), wherein the address terminals transfer address signals, the data transmission terminals transfer data signals and the control terminals transfer control signals.

10. As per claim 16, Mowery, Jones and "PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs" teach all the limitations of claim 1 as discussed above, where Mowery further teaches the multiple format interface adapter for small storage further comprising a card insertion detect terminal (Mowery, Fig. 16, ref. 1001, 1002, 1003, 1604) that detect the insertion of any of the storage media (Mowery, Fig. 16 and col. 8, ll. 41-67).

11. As per claim 17, Mowery, Jones and "PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs" teach all the limitations of claim 1 as discussed above, where Mowery further teaches the multiple format interface

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adapter for small storage comprising wherein the double-configuration interface includes a power terminal that transmits an operating voltage issued from the system end (e.g. host) when one of the storage media inserts (Mowery, Fig. 6B; Fig. 8 and col. 5, l. 32 to col. 6, l. 20), as the power for operation from the host will not apply if there is no storage media card inserted.

12. As per claim 21, Mowery, Jones and "PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs" teach all the limitations of claim 1 as discussed above, where Mowery and Jones further teach the multiple format interface adapter for small storage comprising wherein the signal converter control chip is an IDE converter control chip to convert storage media compatible USB signals (Mowery, USB interface of Fig. 6C) to system compatible IDE signals (Jones, Fig. 3B, ref. 51) (Jones, [0050]).

13. As per claim 22, Mowery, Jones and "PCMCIA Announcement Development for New Expansion Technology for Mobile and Desktop PCs" teach all the limitations of claim 1 as discussed above, where Mowery further teaches the multiple format interface adapter for small storage comprising wherein the signal controller includes a circuit board and a multi-card reader control chip (Mowery, Fig. 4), wherein the card (Fig. 4, ref. 400) would obviously be implemented utilizing the circuit board having the multi-card reader control chip soldered on the circuit board.

**V. CLOSING COMMENTS**

**Conclusion**

**a. STATUS OF CLAIMS IN THE APPLICATION**

The following is a summary of the treatment and status of all claims in the application as recommended by M.P.E.P. 707.07(i):

**a(1) CLAIMS REJECTED IN THE APPLICATION**

Per the instant office action, claims 1, 3, 7-8, 16-17 and 21-22 have received a final action on the merits. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**b. DIRECTION OF FUTURE CORRESPONDENCES**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

**IMPORTANT NOTE**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 06, 2007

Chun-Kuan (Mike) Lee  
Examiner  
Art Unit 2181

  
DONALD SPARKS  
SUPERVISORY PATENT EXAMINER